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PLANT INSECT RESEARCH
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U. S. DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON 25, D. C.

In Cooperation with State and Federal Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING AUGUST 25, 1945
(Eighteenth Cotton Insect Survey Report for 1945)

Clear, hot, dry weather is badly needed in practically all of the area where the boll weevil occurs to hasten maturity of the cotton crop and check the severe weevil damage to immature bolls.

New infestations of leafworms were reported from Harrison County in southern Mississippi, Lee and Tate Counties in northern Mississippi; Lincoln County in Arkansas; Archer, Hockley, Brazoria, Matagorda, Fayette, San Saba, Coleman, Nolan, Gaines, Borden, Lynn and Dawson Counties of Texas. Leafworms now occur throughout Texas and are ragging some fields as far north as Waco and west to San Angelo. Only limited control is being used. Heavy moth populations were present in many fields of the coastal area and the effect of the tropical hurricane on spreading or destroying the moths and remaining pupae is not yet known. Many fields are now too far advanced for leafworms to cause serious damage.

Bollworms continue to increase in many areas of Texas, Oklahoma, Arkansas, and Louisiana. Light to heavy damage is reported from many areas of Texas, especially to young or succulent cotton. Damage ranged from 11 to 100% in the fields inspected in Kaufman, Van Zandt, Dallas, Taylor, Nolan and McLennan Counties of Texas. Damage was also reported from Cotton, Comanche, and Bryan Counties of Oklahoma.

Aphid populations have passed the peak and are now declining in the Delta.

BOLL WEEVIL

TEXAS: Scattered rains and low temperatures were favorable for weevil increase and boll damage is increasing in the northern half of Texas. Heavy rains accompanying the tropical hurricane relieved the prolonged drought in southern counties but considerable destruction of unharvested cotton resulted in the upper part of the storm area. Where cotton is still fruiting in central Texas, nearly all squares are being punctured by weevils and in many fields young bolls are being ruined. Only a small percentage of farmers are dusting.

Examinations of 180 fields in 32 counties averaged 44% infested squares or a weighted average of 47% for the State. The weighted State average last week was 35%. Eight percent of the fields were not infested; 19% ranged from 1 to 10%; 12% ranged from 11 to 25%; 15% ranged from 26 to 50%; and 46% of the fields had more than 50% punctured squares. The infestation rose considerably in the western part of the boll weevil area.

(Over)

OKLAHOMA: Conditions were good for cotton development but weevil infestation continues to increase except in the southwestern section where it is drier and cotton is fruiting rapidly. C. F. Stiles, Extension Entomologist, advises growers: "It takes 50 to 60 days from the time the bloom opens until the boll opens during this time of the year. It takes about 25 to 27 days for a square to reach bloom stage. By figuring this rate of development, each grower can decide for himself whether poisoning this late in the season would be safe, considering the time that frost will come which usually is about November 1."

The infestation in 227 fields examined in 27 counties well distributed over the State ranged from 0 to 91%, with an average of 29% and a weighted State average of 26%. More fields were examined in the lightly-infested western counties this week than last. Four percent of the fields were not infested; 16% ranged from 1 to 10% infestation; 34% from 11 to 25% infestation; 29% from 26 to 50% infestation; and 17% of the fields above 50% infestation.

The infestation in 9 central counties averaged 29%; in 4 east central counties 33%; in 9 south central counties 31%; and in 3 southwestern counties 22%.

LOUISIANA: Weevil damage to bolls is very severe in Louisiana. Practically all of the remaining squares are now being punctured, with an average infestation of 89% in the 160 fields examined this week in the northern part of the State. All but two of the fields had more than 50% punctured squares.

ARKANSAS: Weevil damage to bolls is increasing rapidly in southern Arkansas. The average square infestation was 39% in the 285 fields examined this week including fields in the central section of the State. Twenty-two percent of the fields were not infested; 15% ranged from 1 to 10% infestation; 10% from 11 to 25% infestation; 17% from 26 to 50% infestation; and 36% of the fields had over 50% infestation. The average infestation was 35% in 175 fields in the southeastern section; 96% in 20 fields in the south central section; 77% in 17 fields in the southwestern section; 18% in 20 fields in the central section; and 1% in 9 fields in the east central section of Arkansas.

MISSISSIPPI: Rains over most of the State with daily showers in the Delta were very favorable for weevils and made control operations difficult. Dr. Lyle reports the heaviest weevil damage since 1941. Cotton is opening in the southern half of the State. The succulent condition and continued fruiting of cotton in the Delta indicate the possibility of producing a top crop if weevils are controlled. Several growers who have not used control in several years are planning to dust as soon as the weather clears. Most of the fields examined this week were in the central and northern Delta where the weevil infestation is not as high as in the southern section. Of the 108 fields examined, 87 were infested with an average of 41% punctured squares. The average for all 108 fields was 33% infestation. The lower average this week is not due to a decrease in weevil damage but to more northern fields. No infestations were found in 20% of the fields; from 1 to 10% in 25% of the fields; from 11 to 25% in 6% of the fields; and above 26% infestation in 49% of the fields.

FLORIDA: Square examinations in the vicinity of Gainesville ranged from 0 to 80% infestation, with an average of 27%. Reports from the northern part of the State indicate heavy weevil damage.

GEORGIA: Most of the squares examined this week were in northern Georgia. as few squares are available in the southern section of the State. The average infestation was 48% in the 90 fields examined, or an increase from 40% last week. The average infestation in 67 fields in the northeast was 51% and in 13 fields in the northwest 30%. One uninfested field was observed in each section.

SOUTH CAROLINA: Cloudy, rainy weather prevailed in the Carolinas for the sixth consecutive week causing a critical situation for cotton, especially in the southern and coastal plains sections. Cotton is generally rank in growth and many bolls are beginning to rot. Most of the top bolls are also damaged by weevils, ranging from one or more injured bolls to complete loss of bolls. .

Square examinations in 42 fields in 6 Piedmont counties showed an average infestation of 77%. All of the fields were infested and all but three had more than 50% punctured squares.

NORTH CAROLINA: Weevil infestation in the Piedmont and western cotton counties continues comparatively light and if weather conditions return to normal the prospects are for a good crop. Examinations in 72 fields in this section averaged 21% infestation. Twelve percent of the fields were not infested; 25% ranged from 1 to 10% infestation; 32% from 11 to 25% infestation; 21% from 26 to 50% infestation; and 10% above 50% infestation.

COTTON FLEA HOPPER

TEXAS: The populations in 231 fields examined averaged 9.1 flea hoppers per 100 terminal buds, or about the same as last week. Sixteen percent of the fields were not infested; from 1 to 10 flea hoppers per 100 buds were found in 61%; from 11 to 25 flea hoppers in 21%; and more than 50 flea hoppers per 100 buds in 2% of the fields.

OKLAHOMA: Flea hoppers are causing but little damage over most of the State. An average of 4.9 flea hoppers per 100 terminal buds were found in the 219 fields examined. Seventy-five percent of the fields had less than 10 flea hoppers per 100 terminals.

OTHER PLANT BUGS

ARIZONA:

Salt River Valley: Cotton continues to fruit well but shedding is heavy in some fields. Picking has started in stub cotton and bolls are opening in plant fields.

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Lygus bugs decreased considerably in all fields examined but stinkbug populations remained about the same. In the Goodyear area injurious insect populations averaged 3.5 per 100 sweeps on stub cotton and 11 on plant cotton. Last week the averages were 20 and 43, respectively. At Mesa sweepings on plant cotton averaged 6 injurious insects per 100 strokes. There was also great reduction in the Buckeye and Litchfield areas and nearly all of the injurious insects collected in dusted fields were stinkbugs.

Santa Cruz Valley: Cotton continues to make good progress. High winds during the latter part of the week interrupted airplane dusting schedules. Injurious insect populations in dusted fields averaged 7 and in the undusted fields 13 per 100 net strokes.

Graham County: Populations remain at about the same levels, ranging from 0 to 21 injurious insects per 100 sweeps. Lygus and stinkbugs are decreasing but the superb plant bug is increasing.

NEW MEXICO: In Dona Ana County several heavy rains fell this week and while cotton is making satisfactory progress shedding is more noticeable. The injurious hemiptera populations showed a decided decrease from last week, ranging from 0 to 16 per 100 net strokes.

In Chaves County there were several heavy rains accompanied by high winds in the Roswell area. Hail caused approximately 50% damage to 400 acres of cotton. The injurious hemiptera populations were much lower than last week, ranging from 0 to 8 per 100 strokes.

TEXAS: There are a few heavy infestations of the rapid plant bug in fields of rank late cotton in the vicinity of Waco.

FLORIDA: Green stinkbugs are rather numerous in most fields around Gainesville and will probably cause considerable damage to the top crop of bolls. Only a few cotton stainers were noticed.

APHIDS

In the vicinity of Tallulah, Louisiana, aphids have caused considerable shedding of leaves and damage in many fields where calcium arsenate was used without nicotine. A decrease in populations followed several heavy showers this week.

At Stoneville, Mississippi, aphids had developed to damaging numbers in calcium arsenate treated plots by August 1 but have steadily decreased until they are now as low as in the checks. Additional quantities of nicotine moving into the Delta has eased the supply situation somewhat.

Prepared August 29, 1945.